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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,919	08/09/2006	Francesc Ayats	102792-589-11377P4US	9000
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NORRIS, MCLAUGHLIN & MARCUS 875 THIRD AVE 18TH FLOOR NEW YORK, NY 10022			EXAMINER MALEKZADEH, SEYED MASOUD	
			ART UNIT 1791	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,919	Applicant(s) AYATS ET AL.	
	Examiner SEYED M. MALEKZADEH	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/19/2006 and 06/02/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 14 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 14 merely recites the usage of the pellets products obtained by shaping process claim 1; therefore, it does not further limit the subject matter of the claim 1, 11, or 12.

Claim Rejections - 35 USC § 112, 2nd paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitations "the melting point of the plasticiser" in fourth and fifth lines and "the melting or plastification temperature of the thermoplastic polymer" in fifth and sixth lines. There are insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitations “the material” and “the extruder” in second line, “the melting or plastification temperature of the thermoplastic polymer” in the third and fourth lines. There are insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation “the raw materials” in the second line. There is insufficient antecedent basis for this limitation in the claim because neither claim 1 nor claim 7 recites any raw materials.

Claim 14 provides for the use of “the pellets” of claim 1 in “injection moulding process”, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 14 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim 15 provides for the use of “water soluble pouches containing a detergent formulation” in claim 15 for use in “an automatic washing machine or an automatic dishwasher”, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is

intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 15 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claims 18-20 recite the limitations "the extruder" and "the melting or plastification temperature of the thermoplastic polymer" in the second and third lines of claim. There are insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7-12, 14, 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Zimmermann et al (US 4,323,492)

Zimmermann et al. (US 4,323,492) teach a shaping process such as compression molding, extrusion, or injection molding for preparing a granular plasticizer-containing polyvinyl alcohol as pellets comprising a polyvinyl alcohol which is shown with (PVOH, PVA, or PVAL) as a thermoplastic polymer which is soluble or dispersible in the water, plasticizer which is solid in the room temperature, and water as an additive (See abstract and lines 19-24, column 4) in which all these materials in compound provide a raw material composition, wherein the process is run at a temperature above the melting point of the plasticizer and below the melting temperature of the polyvinyl alcohol as the thermoplastic polymer. (See lines 7-12, column 1; lines 65-68, column 2; and also lines 1-12, column 3)

Zimmermann et al. ('492) further teaches the amount of plasticizer to be incorporated in a raw material composition is in the range of from 5 to 50 weight %, preferably 10 to 30 weight % (relative to the polyvinyl alcohol) [See lines 55-64, column 2] in which the prior art discloses the plasticizer in the composition is at least 15%.

Furthermore, Zimmermann et al. ('492) teach the maximum temperature does not exceed 140°C, and is perfectly in the range of from 100°C to 130°C. (See lines 7 - 12, column 3) Therefore, since the melting temperature of polyvinyl alcohol as the thermoplastic polymer in the composition is 230 °C, the prior art teaches the material during the mixing operation in the process

does not exceed a temperature which is 45°C below the melting temperature of the thermoplastic polymer at any time.

Also, Zimmermann et al. ('492) teach the mixture of polyvinyl alcohol, plasticizer, and the water provide a component consisting of particles having a diameter not exceeding 300 micrometers (μm), therefore, the particle size of the raw materials used is below 2000 micrometers (μm).

Further, Zimmermann et al. ('492) also teaches the plasticizer mixed in the component is a carbohydrate selected from the group such as sorbitol, ethyleneglycol, glycerol. (See lines 59-64, column 2)

Moreover, Zimmermann et al. ('492) disclose the granular PVAL of the invention can be molded thermoplastically without any difficulty, for example, by compression molding, injection molding and extrusion, and it is suitable for the manufacture of any shaped articles, for example, plates, tubes, profiles, fibers and, especially, films and sheets. (See lines 19-24, column 4)

The prior art, thus meets all the structural limitations, and therefore, Zimmermann et al. ('492) anticipates claims 1-5, 7-12, 14, 16-20.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

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skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 6, 13, and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmermann et al. ('492) in view of Famili et al. (US 5,206,278)

Zimmermann et al. ('492) teaches all the process limitations of a method for making pellets of a thermoplastic extrudable resin composition as discussed above in rejection of claims 1-5, 7-12, 14, 16-20; however, prior art fails to teach the temperature of the raw material within the extruder is at least 40°C, as claimed in claim 6; further, prior art fails to teach the thermoplastic polymer comprises poly(vinylpyrrolidone), poly(acrylic acid), poly(maleic acid), a cellulose derivative, poly(glycolide), poly(glycolic acid), poly(lactides), poly(lactic acid) and copolymers, as claimed in claim 13. Moreover, Zimmermann et al. ('492) fails to teach applying the process to manufacture water soluble pouches containing detergent formulation, as suggested in claim 15.

In the analogous art, Famili et al. (US 5,206,278) teach a method of extruding the polyvinyl alcohol composition in which the method include the steps of adding sufficient energy to the polyvinyl alcohol composition melt the polyvinyl alcohol composition and essentially eliminate the polyvinyl alcohol crystallinity in the melt, and simultaneously removing energy from the melt at a rate sufficient to avoid decomposition of the polyvinyl alcohol. (See abstract) Also, Famili et al. ('278) disclose a suitable PVOH as a thermoplastic polymer for use in preparation of the extrudable PVOH/PEO composition and thermoplastic pellets including copolymers of vinyl alcohol and methyl methacrylate consisting of 94-98 mole % vinyl alcohol and 2-6 wt % methyl methacrylate. (See lines 67-68, column 3 and lines 1-12, column 4) Moreover, prior art disclose the temperature of extrusion die for extruding different PVOH's compositions with different PVOH's molecular weight varies between 186°C to 207°C. (See lines 30-50; table 1)

Furthermore, Famili et al. ('278) teach about the desirable physical and mechanical properties of the thermoplastic PVOH which make it suitable for packaging applications where the contents must be dissolved or dispersed in water. Examples of such packaging applications for these PVOH materials include pesticides which are applied as a caustic cleaner or detergents which are dissolved during use. Also, Famili et al. ('278) discloses the advantages of using a water soluble film for packaging in order to improve in measuring

accuracy, and eliminate the need to clean and discard toxic chemical containers after use. (See lines 39-57, column 1)

Therefore, it would have been obvious for one of ordinary skill in the art at the time of applicant's invention to modify the teachings of Zimmermann et al. ('492) by adjusting the temperature of the raw material within the extruder die in which the temperature to be at least 40°C and higher to decompose the vinyl alcohol polymers composition in order to remove crystallinity of the polymer and to increase the thermoplasticity of the vinyl alcohol polymers, as suggested by Famili et al ('278).

Also, it would have been obvious for one of ordinary skill in the art at the time of applicant's invention to modify the teachings of Zimmermann et al. ('492) by providing a thermoplastic polymer comprising a copolymer in order to produce a shaped article which has improved pH stability and salt solution solubility, as suggested by Famili et al. ('278).

Furthermore, it would have been obvious for one of ordinary skill in the art at the time of applicant's invention to use the manufacturing process taught by Zimmermann et al. ('492) to manufacture water soluble pouches containing detergent formulation in order to improve in measuring accuracy and eliminate the need to clean and discard toxic chemical containers after use, as suggested by Famili et al ('278).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Masoud Malekzadeh whose telephone number is 571-272-6215. The examiner can normally be reached on Monday – Friday at 8:30 am – 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin, can be reached on (571) 272-1189. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance form a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. M. M./

Examiner, Art Unit 1791

/Steven P. Griffin/

Supervisory Patent Examiner, Art Unit 1791